

July 14, 2017

Mr. Mark Williams, Mailstop 3E
California Air Resources Board
P.O. Box 2815
Sacramento, California 95812

RE: Comments Regarding California ZEV Investment Plan Supplement

The Fuel Cell and Hydrogen Energy Association (FCHEA) appreciates the opportunity to provide comments to the California Air Resources Board (ARB) regarding Volkswagen Group of America's Supplement to the California Zero Emission Vehicles (ZEV) Investment Plan: Cycle 1 ("Supplement")¹. The Supplement seeks to respond to ARB's request for additional information to address specific shortcomings of Volkswagen's California ZEV Investment Plan: Cycle 1 ("Plan").²

Summary

California has been a leader in developing and adopting fuel cell technology. As currently drafted, the Supplement omits investment in hydrogen refueling stations (HFS), a stance that is inconsistent with State efforts, the 2016 ZEV Action Plan, ongoing hydrogen infrastructure investments, the eight-state ZEV MOU, and industry efforts to bring many ZEV models to the market. Therefore, FCHEA asks the ARB to maintain its position of supporting all ZEV technologies by postponing the approval of the Supplement, and working with Volkswagen to amend the Supplement to include HFS investment.

Background

The Fuel Cell and Hydrogen Energy Association is the trade association dedicated to the commercialization of fuel cells and hydrogen energy technologies. FCHEA member organizations³ represent the full global supply chain for hydrogen and fuel cells, including automakers; material, component, stack and system manufacturers; hydrogen producers and

¹ "Supplement to California ZEV Investment Plan: Cycle 1," June 29, 2017

https://www.arb.ca.gov/msprog/vw_info/vsi/vw-zevinvest/documents/california_zev_investment_plan_supplement_062917.pdf

² "Letter to Electrify America from ARB," May 24, 2017

https://www.arb.ca.gov/msprog/vw_info/vsi/vw-zevinvest/documents/zip_supplement_request_052417.pdf

"California ZEV Investment Plan: Cycle 1," March 14, 2017

https://www.arb.ca.gov/msprog/vw_info/vsi/vw-zevinvest/documents/vwinvestplan1_031317.pdf

³ Members include Air Liquide, Air Products, Alteryx Systems, American Honda Motor Company, Anglo American Marketing Limited, Applied Research Center, AREVA, Black & Veatch, Bloom Energy, BMW of North America, California Air Resources Board, California Fuel Cell Partnership, CERES Power, CHANGE, Connecticut Hydrogen-Fuel Cell Coalition, CSA Group, Daimler, Doosan Fuel Cell America, Edgewise Energy, Fuel Cell Energy, Fuel Cell Seminar & Energy Exposition, Fuji Electric, GE-Fuel Cells, General Motors, Gore Fuel Cell Technologies, Hydrogenics, Hyundai, Idaho National Laboratory, Intelligent Energy, Johnson Matthey Fuel Cells, LG Fuel Cell Systems, Methanol Institute, myFC, National Renewable Energy Laboratory, Nebraska Public Power District, Nel Hydrogen, Nissan North America, Nuvera Fuel Cells, Ohio Fuel Cell Coalition, Pajarito Powder, PDC Machines, Plug Power, Sandia National Laboratories, Savannah River National Laboratory, Shell Oil, South Coast Air Quality Management District, 3M, The Linde Group, Toyota Motor North America, TreadStone Technologies, and United Hydrogen.

energy companies; government laboratories and agencies; trade associations; utilities; and end users.

FCHEA supports ZEV adoption as a key pathway to advance energy independence and to reduce the carbon intensity of transportation fuels. Because fuel cell vehicles (FCVs) combine the emissions-free driving of battery electric vehicles (BEVs) with the range and convenience of gasoline-powered vehicles, FCHEA urges building refueling station networks that support bringing these cars to market. Networks include HFS, as well as the supply chain for producing, delivering, and storing hydrogen. Growing networks add incentive to “early adopters” to proliferate vehicle sales, leading to new jobs across the hydrogen industry, new strong, vibrant communities committed to the environment, and “cleaner, greener” vehicle-based transportation systems.

Supplement Omits HFS Investment

The Plan anticipates spending an estimated \$120 million through June 2019 to site, construct and initiate operations of as many as 3,000 electric vehicle service equipment (EVSE) unit(s) (“chargers”) across 400 or more community and high-volume highway corridor locations; an estimated \$44 million to develop foundational infrastructure for the launch of a Green Cities initiative; and an estimated \$20 million to conduct consumer education programs boosting the awareness of and access to ZEVs.

However, the Supplement – like the Plan - omits investment in HFS to re-fuel FCVs. The omission creates inequity among ZEV technologies by exclusively investing in recharging infrastructure, thus inhibiting the growth of FCVs and California’s HFS network.

California government agencies have detailed that the growth of a HFS network is essential if the State is to meet its ZEV deployment, greenhouse gas reduction, air quality improvement, and petroleum reduction goals set forth in State and federal laws and programs.⁴ The justification provided for omitting HFS investment is based on a selective reading of available analysis. Investment is required to help minimize or eliminate the hydrogen fueling capacity

⁴ “Greenhouse Gas Reduction Target,” Executive Order B-30-15, April 29, 2015

<https://www.gov.ca.gov/news.php?id=18938>

“ZEV Action Plan,” February, 2013

[https://www.opr.ca.gov/docs/Governor's_Office_ZEV_Action_Plan_\(02-13\).pdf](https://www.opr.ca.gov/docs/Governor's_Office_ZEV_Action_Plan_(02-13).pdf)

“Inaugural Address of Gov. Edmund G. Brown, Jr., January 5, 2015

<https://www.gov.ca.gov/news.php?id=18828>

“California Global Warming Solutions Act,” 2006

[ftp://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf](ftp://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_0001-0050_ab_32_bill_20060927_chaptered.pdf)

“Clean Air Act of 1963,” 42 U.S.C., §§7401-7671

<https://www.gpo.gov/fdsys/pkg/USCODE-2008-title42/pdf/USCODE-2008-title42-chap85.pdf>

“California Vehicle and Air Regulations,” 13 Cal. Code Regs., 17 Cal. Code Regs.

<https://www.arb.ca.gov/regs/regs.htm>

shortfall forecast in 2020.⁵ Postponing investment creates the station capacity shortfall forecast in 2020 or 2021, thus failing to address inequity among ZEV technologies.⁶

Supplement Lacks Criteria for Including Fuel Cell Technologies in Outreach Activities

The Supplement states Electrify America plans to incorporate information on attributes of electric drive vehicles powered by both batteries and hydrogen fuel cells in its Cycle 1 California-specific brand-neutral education and outreach activities.⁷ However, in a footnote to this statement, the Supplement significantly modifies the statement, stating fuel cell technology will be incorporated “...where appropriate.” The Supplement should include the criteria to be used to determine the appropriateness of incorporating fuel cell technology in education and outreach activities. Doing so will help make clear Electrify America’s intent to deploy public education and outreach activities describing the attributes of all ZEV.

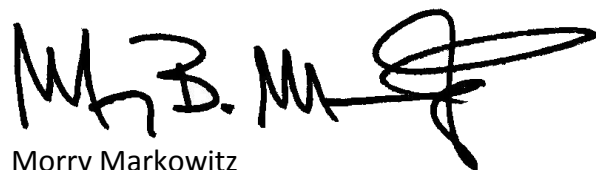
Conclusion

FCHEA urges ARB to postpone approval of the Supplement, and to work with Volkswagen to amend the Supplement as described above. Doing so will help grow consumer interest in all ZEV technologies and help improve HFS access and customer refueling experience.

FCHEA looks forward to cooperating with California policy-makers and stakeholders to further advance HFS network expansion, public awareness and consumer satisfaction.

Thank you for your consideration of these comments. If you have any questions, please contact me at the Fuel Cell and Hydrogen Energy Association, 1211 Connecticut Avenue NW, Suite 650, Washington, DC 20036; at (202) 261-1337; or at mmarkowitz@fchea.org.

Sincerely,



Morry Markowitz
President
Fuel Cell and Hydrogen Energy Association

cc: The Honorable Jim Beall, Chair, Senate Committee on Transportation and Housing
The Honorable Bob Wieckowski, Chair, Senate Committee on Environmental Quality

⁵ “Annual Evaluation of Hydrogen Fuel Cell Electric Vehicle Deployment and Hydrogen Fuel Station Network Development,” California Air Resource Board, July, 2016, Page 11

https://www.arb.ca.gov/msprog/zevprog/ab8/ab8_report_2016.pdf

⁶ “Joint Agency Staff Report on Assembly Bill 8: 2016 Assessment of Time and Cost Needed to Attain 100 Hydrogen Refueling Stations in California,” California Energy Commission, January, 2017, Page 31

<http://www.energy.ca.gov/2017publications/CEC-600-2017-002/CEC-600-2017-002.pdf>

⁷ “Supplement to California ZEV Investment Plan: Cycle 1,” Page 29